

XIII. THE OCCURRENCE OF LIZARDS IN PENNSYLVANIA.

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The Carnegie Museum has recently received so many inquiries concerning the presence of lizards in Pennsylvania that it has seemed worthwhile to list the species, which have been recorded from the state, and to consider in some detail the occurrence of each form. It is hoped that this paper will encourage naturalists to attempt to locate the various lizards in additional localities in order to ascertain more definitely the range of each species within the state.

In the preparation of this paper I am indebted to Dr. F. N. Blanchard for helpful criticism and advice.

The collection of Pennsylvanian specimens in the Carnegie Museum is fairly large and includes specimens of many species, which are apparently rare in the state. This material has been mainly gathered by Dr. D. A. Atkinson, Honorary Curator of Herpetology. His indefatigable collecting more than twenty-five years ago, before the Pittsburgh district became so populous, and before the streams were polluted, supplied the Museum with material which could not be duplicated today. More recently, in spite of the pressure of professional duties, he has collected many valuable specimens. The remainder of the collection has been gathered, to a great extent, by Messrs. G. A. Link, Sr., S. N. Rhoads, and, during recent years, by the writer.

The basis for any work on the distribution of Pennsylvanian reptiles is the series of reports by Surface. However, these papers are not readily available, as they are now out of print. Moreover, since their publication more thorough collections have been made in the western part of the state, and more specimens of the rarer species have been secured. In addition to Surface's papers, a number of local or county lists have been published from time to time, and many records are scattered through the literature.

Five species of lizards have been recorded from Pennsylvania. Of this number only the following three are represented by specimens:—

Fence Lizard, *Sceloporus undulatus*

Black Skink, *Eumeces anthracinus*

Common Skink, *Eumeces fasciatus*

The remaining species, as listed below, have been recorded from Pennsylvania. The occurrence of these species is extremely doubtful, and is considered in detail on succeeding pages.

Six-lined Lizard, *Cnemidophorus sexlineatus*

Ground Lizard, *Leiolopisma laterale*

1. Fence Swift, *Sceloporus undulatus* (Latreille)

This species can be distinguished from the other lizards listed in this paper by its keeled dorsal scales. It is the most common lizard in the state. I know either of specimens from, or published records for, the following counties:—

Allegheny	Delaware
Beaver	Franklin
Berks	Fulton
Bucks	Juniata
Chester	Lancaster
Clearfield	Mifflin
Clinton	Perry
Cumberland	Pike
Dauphin	Snyder

York

There is a specimen in the Museum of Comparative Zoölogy at Cambridge, Mass., labeled "Lookout Mt., Penna." If this specimen is from Lookout, Wayne County, as seems probable, it is the northernmost record for the state. This lizard is to be expected in all of the southern and in most of the mountainous counties of the state. It is found sunning itself on boulders, running along rail fences, and playing around old shanties and lumber-piles.

2. Black Skink, *Eumeces anthracinus* (Baird).

This rare skink is generally distinguished from *E. fasciatus* by the presence of only four longitudinal light lines. There is never a distinct vertebral stripe present, and each lateral pair of light lines encloses a wide stripe of anthracite black. According to Burt (1928) the above distinctions do not always serve to separate these two species, for the young of *anthracinus* may be almost uniform blackish,

and the vertebral stripe of *fasciatus* tends to disappear with age in both sexes. He uses the coloring of individual dorsal scales to distinguish puzzling specimens. Thus in *anthracinus* the scales of the mid-dorsal region are unicolor, while in *fasciatus* these scales have perceptible light and dark areas, the center being ordinarily light. In old males of *fasciatus* the lines may disappear entirely, and the cheeks become reddish and bulging. From what is known of old males of other species of the genus it would be logical to expect the same development to occur in *anthracinus*, but Burt (1928, p. 49) says "cheeks never bulging." In a recent interview he stated that the examination of additional material had proved that old males of *anthracinus* also develop bulging cheeks, but that all such specimens examined could be separated from the old males of *fasciatus* by the unicolor dorsal scales.

Both *E. anthracinus* and *E. fasciatus* can be distinguished from *Leiopisma laterale* by their greater size, better developed limbs, and scaly lower eyelids.

The type specimens of *anthracinus* were taken on the North Mountain near Carlisle, Cumberland Co., Pennsylvania. There is one specimen (No. 6) in the Carnegie Museum, which was secured at Karthaus, Clearfield County, July 13, 1908, by Atkinson and Link. No. 38197 in the National Museum collection is labeled "Pa. Mts. near Ronova, 1907, J. B. Smyth." This locality is probably intended for Renova, Clinton County. These three records apparently are the only ones for the state.

Roddy (1928, p. 46) says, "Five species [which would include *E. anthracinus*] occur in Lancaster County and the same number in the state." However, on page 50, he contradicts himself, as follows:—"It is a rare skink in Lancaster County, but of wide distribution, extending from northern New Jersey to Texas. . . . To my knowledge it has never been reported as occurring in the county [Lancaster], but, without doubt, will be found in the mountainous sections of Lancaster-Lebanon or Lancaster-Berks borders."

3. Common Skink, *Eumeces fasciatus* (Linné).

This lizard, frequently referred to as the Blue-tailed or Red-headed Skink, has been distinguished from *E. anthracinus* above. Young specimens and the majority of females show five longitudinal light lines. Since this form cannot be distinguished from *anthracinus* in

the field I am forced to omit quite a number of sight records of "blue-tailed skinks" which should probably be referred to this species. It has, however, been recorded from the following counties:

Allegheny	Huntingdon
Center	Lancaster
Clarion	Montour
Clinton	Westmoreland
Cumberland	York
Dauphin	

This distribution seems to indicate a greater abundance in the mountainous counties of the state. Careful collecting in such regions proves that this lizard is commoner than is generally supposed. Ian Sharpe and William Hamnett took four specimens in a sawdust-pile near Waterford, Westmoreland County, during the summers of 1927 and 1928. I examined these specimens, and also five eggs and one embryo, the remains of a nine-egg clutch, which was found in the same sawdust-pile about the middle of July 1928. The embryo measured 34 mm. in length.

4. **Six-lined Lizard**, *Cnemidophorus sexlineatus* (Linné).

This lizard may be most easily distinguished from the four other species mentioned in this paper by the differences in the tail, the scales of which are keeled and abruptly different from those on the body. It also differs in having granular scales on the back; large, oblong plates on the belly arranged in eight regular rows; and large plates on the arms and legs.

Surface (1908, p. 253) lists this species as of possible occurrence in Pennsylvania. Roddy (1928, p. 51) says, "It occurs in Lancaster County mainly in the lower Susquehanna Valley." I am well aware that this form has been taken in Maryland, and that if it should range into Pennsylvania, the lower Susquehanna Valley would be the logical place to expect it. However, in the absence of specimens, it cannot be definitely listed from the state.

5. **Ground Lizard**, *Leiopisma laterale* (Say).

This lizard differs from the others considered here in having minute limbs, and in its small size. It differs from the species of *Eumeces* in

having lower eyelids with a transparent central part, and an elongate, cylindrical body.

Regarding the occurrence of this species in Pennsylvania, Surface (1908, p. 251) says, "We have not been fortunate enough to collect specimens of this species in Pennsylvania, but we have seen a specimen No. 3550, in Cornell museum, which was collected on the Caroline Hills near Ithaca, N. Y., April 13, 1892, by Messrs. W. J. Terry and Louis A. Fuertes. While it is abundant in the Southern States it is evidently rare in Pennsylvania, although it is to be found in this state." Reed and Wright (1909, p. 408) later published the record for this same specimen, referring to it as *Leiolopisma laterale*. Bishop (1918, p. 36) has the following to say in regard to this specimen: "A third species was recorded by Reed and Wright from Cayuga Lake Basin as *Lygosoma (Leiolopisma) laterale* (Say). While examining this specimen a few years ago, Dr. Wright called my attention to the fact that the supposed *Leiolopisma laterale* had proven to be *Plestiodon anthracinus* Baird." Roddy (1928, p. 50) was apparently unaware of Bishop's published statement for he says, "This lizard, sometimes known as the Brown-backed Skink or lizard, belonging mainly to the Carolinian fauna, has, however, been taken as far north as Ithaca, New York. I have observed it only once in the County [Lancaster] near Holtwood."

While it is possible that this species, which has been reported from both Maryland and New Jersey, may enter southern Pennsylvania, I hesitate to include it on the basis of a "sight record." It has been confused in the laboratory with *Eumeces anthracinus*, and Ditmars (1907, pp. 203-204) speaking of its identification in the field says: "Many times has the writer mistaken these reptiles for small salamanders—*Spelerpes* or *Plethodon*." Therefore, until a Pennsylvanian specimen is collected, this skink should not be listed in the fauna of the state.

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